

REMARKS

Applicant respectfully thanks the Examiner for acknowledging that the claim rejections in the March 3, 2005 office action were overcome by Applicant's response thereto. However, Applicant submits that the new rejections of claims 1-5 and 7-26 in current office action are inappropriate, and should be withdrawn in view of the at least the reasons set forth in the remarks that follow. In particular, Applicant submits that in making the current claim rejections the Examiner has incorrectly interpreted one or more of the cited references, which also cannot properly be combined absent impermissible hindsight.

Claims 1-5 and 7-26 stand rejected pursuant to 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,083,152 to Strong ("the Strong patent") in view of U.S. Patent No. 4,899,787 to Ouchi et al. ("the Ouchi patent") and in further view of U.S. Patent No. 5,741,429 to Donadio, III et al. ("the Donadio patent").

Claim 1 is directed to an insertion tube for an inspection device, wherein the insertion tube comprises: a helically wound spiral tube; a first braided tube disposed at least partially over the helically wound tube; a second braided tube disposed at least partially over the first braided tube; a first polymeric layer disposed between the first braided tube and the second braided tube; and a second polymeric layer coating the outer periphery of the second braided tube. In accordance with claim 1, the first braided tube includes a wire braid having a braid angle that varies along the length of the wire braid.

In the current office action, the Examiner concedes that there are several deficiencies among the references cited in combination to reject claim 1. For one, the Examiner acknowledges that neither the Strong patent nor the Ouchi patent discloses a “braided tube having a wire braid which varies along its length,” as recited in claim 1 of the subject application. However, the Examiner asserts that such a feature is taught by the Donadio patent, which, according to the Examiner, discloses “an analogous flexible tubular device having a multi-wire coil 21 which is capable of being formed in varying configurations, from the angle of the braided wire to the number of filaments the braided wire is composed of. Depending on the braid angle the tube will either be more flexible or stiffer (see Col. 6, line 52 - Col. 7, Line 14). Based on this purported disclosure in the Donadio patent, the Examiner further contends that “[i]t would have been obvious to one skilled in the art to vary the braid angle of the wire braid over the length of the tube in the apparatus of Strong and Ouchi et al. in order to provide a tube with varying flexibility characteristics over its entire length as taught by Donadio, III et al.”

Applicant submits that the rejection of claim 1 on this basis is improper for at least the reason that the Examiner has mischaracterized the teachings of the Donadio patent. First, the Donadio patent does not list braid angle among the characteristics of its multi-wire coil that can be varied in order to affect the flexibility of its coated flexible tubular member, and this omission only serves to underscore the fact that the Donadio patent does not actually teach or suggest varying braid angle in order to affect stiffness.

Moreover, if anything, varying the flexibility characteristics or configurations of the multi-wire coil (see reference numeral 21) of the coated flexible tubular member (see reference numeral 20) of the tubular device disclosed in the Donadio patent is analogous to varying the stiffness of either the flexible spiral tube (see reference numeral 14) of the insertion tube disclosed in the Strong patent or the innermost metallic tubular spiral (see reference numeral 1) of the tube disclosed in the Ouchi patent. This is because just as the multi-wire coil of the coated flexible tubular member provides base support for the overall tubular device disclosed in the Donadio patent, so too do the flexible spiral tube of the insertion tube of the Strong patent and the innermost metallic tubular spiral of the tubular device of the Ouchi patent.

The tubular device of the Donadio patent does not include one, let alone two surrounding tubes in addition to its flexible tubular member as recited in claim 1, and thus cannot teach or suggest variation of the flexibility characteristics of any such surrounding tubes through braid angle modification. Yet, this is the very proposition for which the Examiner alleges the Donadio patent stands - that is, the Examiner contends that the Donadio patent, which calls for varying the flexibility of a flexible tubular member of a tubular device that includes no surrounding tubes, somehow teaches or suggests varying the flexibility of one or more of such surrounding tubes. Such an allegation represents an unsupported leap in logic and thus does not provide the teaching or suggestion required to support a 35 U.S.C. §103(a) rejection. For at least these reasons, the current rejection of claim 1 is improper and should be withdrawn, as should be that of claims 2-5 and 7-9, each of which depends from claim 1.

Turning now to the other rejected independent claims, claim 10 recites an inspection tube comprising a first wire braided tube having a first braid angle and a second wire braided tube having a second wire braid angle, wherein the first braid angle is less than the second braid angle. Claim 22 recites an insertion tube and claim 24 an inspection device, each of which comprises, in part, a first resilient braided member that has a first braid angle and a second resilient braided member that has a second braid angle, wherein at least one of the first braid angle and the second braid angle is varied along the length of its resilient braided member. Claim 23 recites a method of making an insertion tube for an inspection device in which a first braid having a first braid angle is placed over at least a portion of a helical coil member and a second braid having a second braid angle is placed over at least a portion of the first braid, and wherein the first braid angle is different from the second braid angle.

The Examiner rejects claims 10 and 22-24 for essentially the same reasons as claim 1, namely that the Donadio patent discloses “an analogous flexible tubular device having a multi-wire coil 21 which is capable of being formed in varying configuration, from the angle of the braided wire to the number of filaments the braided wire is composed of. Depending on the braid angle the tube will either be more flexible or stiffer (see Col. 6, line 52 - Col. 7, Line 14). However, as discussed in detail above with regard to claim 1, the Donadio patent does not include braid angle modification among the several characteristics it lists for achieving flexibility variation, plus it only speaks of varying the flexibility characteristics of a base tubular member, not of one or more surrounding tubes, the presence of which is not even taught or suggest by the Donadio patent.

For at least this reason, claims 10 and 22-24 also are patentable over the combination of the Strong patent, the Ouchi patent and the Donadio patent, as are claims 11-21 (which depend from claim 10) and claims 25 and 26 (which depend from claim 24).

Applicant also notes, for the record, that the Examiner's various rejections appear to be the by-product of impermissible hindsight in which the teachings of the specification of the subject application have improperly factored into the Examiner's consideration. However, such an approach has always been expressly proscribed by the Court of Appeals for the Federal Circuit ("CAFC"), as indicated, e.g., by *Interconnect Planning Corp. v. Feil*, 227 USPQ 543,551 (Fed. Cir. 1985), which held that one cannot select separate components of an invention from the prior art for combination with the blueprint supplied by the inventor to support a 35 U.S.C. §103 rejection, and which further held that when prior art references are combined to render obvious a subsequent invention, there must be some reason for the combination other than the hindsight gleaned from the invention itself. These sentiments were echoed in *Crown Operations International Ltd. v. Solutia Inc.*, 62 USPQ2d 1917, 1922 (Fed. Cir. 2002), in which the CAFC emphasized that:

"[d]etermination of obviousness cannot be based on the hindsight combination of components selectively culled from the prior art to fit the parameters of the patented invention." *ATD Corp. v. Lydall, Inc.*, 48 USPQ2d 1321, 1329 (Fed. Cir. 1998). There must be a teaching or suggestion within the prior art, within the nature of the problem to be solved, or within the general knowledge of a person of ordinary skill in the field of the invention, to look to particular sources, to select particular elements, and to combine them as combined by the inventor. See *Ruiz v. A.B. Chance Co.*, 57 USPQ2d 1161, 1167 (Fed. Cir. 2000); *ATD Corp.*, 48 USPQ2d at 1329; *Heidelberger Druckmaschinen AG v. Hantscho Commercial Prods., Inc.*, 30 USPQ2d 1377, 1379 (Fed. Cir. 1994) ("When the patented invention is made by combining known components to achieve a new system, the prior art must provide a suggestion or motivation to make such a combination.").

These cases underscore that there must be a suggestion or motivation to combine references in order to support a rejection based on 35 U.S.C. §103(a), and that the suggestion or motivation must not be influenced by hindsight that is based, for example, on the teachings contained within the specification of the application being examined. Yet, such a hindsight-tinged analysis is exactly what appears to have occurred here. The Examiner has retroactively attempted to locate, in combinations of no fewer than three separate references, the features of the claimed invention through various assumptions made in view of non-suggestive disclosure in the combined references. However, as noted above, this is not an acceptable practice and, accordingly, any rejection based thereupon is *per se* improper. Thus, claims 1-5 and 7-26 of the subject application are allowable for at least this additional reason.

Conclusion

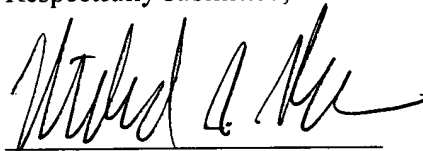
In view of at least the remarks set forth herein, claims 1-5 and 7-26 are believed to be patentable over the currently cited references, which Applicant further submits are not properly combinable absent impermissible hindsight. Therefore, claims 1-5 and 7-26 are in condition for immediate allowance. Reconsideration of these claims and allowance of this application are respectfully requested.

If the Applicant's undersigned representative can be of any assistance in advancing the prosecution of this application, the Examiner is invited to contact him using the information provided below.

Authorization To Charge Necessary Fees

As noted above, a petition for a one-month extension of time is enclosed herein, as is a check for \$120.00 to cover the extension fee. No additional fee(s) is/are believed due in accordance with this submission. However, if any such fee(s) are due, the Commissioner is hereby authorized to charge such fee(s), or to credit any overpayment, to Deposit Account No. 50-0289.

Respectfully submitted,



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